

***Paths to Retention and Turnover in the IT Workforce:
Understanding the Relationships Between Gender, Minority Status,
Job and Organizational Factors***

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**Comparison of Questionnaire
Versions 1.1 and 6.0**

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INTRODUCTION

(Note: This section was not present in the Questionnaire Version 1.1. Some of the questions that appear in this section in the Questionnaire Version 6.0 are noted in the Background Information section.)

ADDITIONS:

Questionnaire Version 1.1	Questionnaire Version 6.0
	<p><i>Question #6</i> Do you telecommute or work remotely from your office as part of your job? (Circle one number)</p> <ul style="list-style-type: none"> • No • Yes
	<p><i>Question #9 **</i> At what point in your life did you first decide to seek an IT career? (Circle one number)</p> <ul style="list-style-type: none"> • Prior to high school • During high school • During undergraduate degree program • Prior to entering graduate degree program • After earning highest academic degree • During non IT employment • Anther time (please specify) _____
	<p><i>Question #12</i> What best describes your IT/computer education/training besides your formal schooling (Circle one answer only)</p> <ul style="list-style-type: none"> • Training for certification • Company provided training courses/seminars (besides certification training) • Other training sources/seminars (not provided by a company; not including Web-based training) • Former work experience • Other (please specify): _____

** Question taken from Paula Levethal's study (NSF-ITWF project on "Multiple pathways toward gender equity in the IT workforce")

JOB DEMANDS

ADDITIONS:

Questionnaire Version 1.1	Questionnaire Version 6.0
	How often do you have problems keeping up with new technology?
	How often do you have to stay at work because of customer demands?
	How often are you overwhelmed by your workload?

ROLE CONFLICT

Deleted the entire concept.

DELETIONS:

Questionnaire Version 1.1	Questionnaire Version 6.0
Persons equal in rank and authority over you ask you to do things which conflict.	**
People in a good position to see if you do what they ask, give you things to do which conflict with one another.	**
People whose requests should be met, give you thing which conflict with other work you have to do.	**

**These questions were deleted in order to reduce the length of the questionnaire. Questions on role ambiguity were kept because previous studies (e.g., Igbaria's studies) have examined this concept among IT workers.

ROLE AMBIGUITY

No modifications, additions, or deletions.

DECISION CONTROL

No modifications, additions, or deletions.

CHALLENGE

No modifications, additions, or deletions.

SUPERVISOR AND CO-WORKER SOCIAL SUPPORT

ADDITIONS:

Questionnaire Version 1.1	Questionnaire Version 6.0
	For <i>How much does each of these people go out of their way to do things to <u>make your life easier</u> for you?</i> , added "Your spouse, friends and relatives"
	For <i>How <u>easy is it to talk with</u> each of the following people?</i> , added "Your spouse, friends and relatives"
	For <i>How much can each of these people be <u>relied on</u> when things get tough at work?</i> , added "Your spouse, friends and relatives"
	For <i>How much is each of the following people <u>willing to listen</u> to your personal problems?</i> , added "Your spouse, friends and relatives"

WORK/FAMILY CONFLICT

MODIFICATIONS:

Questionnaire Version 1.1	Questionnaire Version 6.0
INSTRUCTIONS: At home and work people often face conflicting demands. Here are some statements regarding such problems. How do they apply in your case?	INSTRUCTIONS: The following statements have to do with the way family life and work life can influence each other. For each statement, please circle the response that best describes your situation.
SCALE: Totally true, True to some extent. Untrue to some extent, Totally untrue, Don't know/Not applicable	SCALE: Strongly disagree, Disagree, Neither agree nor disagree, Agree, Strongly agree

DELETIONS:

Questionnaire Version 1.1	Questionnaire Version 6.0
When I come home, I stop totally thinking about my work.	
When at work, I feel free from the family and its noise.	
I find it difficult to concentrate on my work because of home matters,	
I feel that I am neglecting home matters because of my job.	
Sometimes the family has to wait because of my total dedication to my work.	

ADDITIONS:

Questionnaire Version 1.1	Questionnaire Version 6.0
	Family matters reduce the time I can devote to my job. **
	Family obligations reduce the time I need to relax or be by myself. **
	Family activities stop me from getting the amount of sleep I need to do my job well. **
	Problems at work make me irritable at home. **
	My job involves a lot of travel away from home. **
	Family worries or problems distract me from my work. **
	My job takes so much energy I don't feel up to doing things that need attention at home. **
	My job reduces the amount of time I can spend with the family. **
	Have you ever passed up or turned down any of the things because of family obligations: an assignment (Y/N), a promotion (Y/N), relocation (Y/N)? **

**We replaced the original questions by a set of questions that have been used in the Wisconsin Longitudinal Study (WLS). In addition, the new set of questions asks about the influences of work on family as well as the influence of family on work.

TRAINING OPPORTUNITIES

DELETIONS:

Questionnaire Version 1.1	Questionnaire Version 6.0
In your current workplace, do you have good, fair, or poor opportunities for receiving training to improve your professional skills? (Scale: Good, Fair, Poor, Don't know)	
INSTRUCTIONS: The next question concerns training paid for by your employer.	
Over the last 12 months, have you attended courses while being paid by your employer? (Scale: Yes, No-Go to next west of questions on development activities, Don't Know- Go to next set of questions on development activities)	
If Attended Courses: What is the total number of days (in full days) you have attended such courses in the last 12 months? (Scale: Number of days _____, Don't know)	

ADDITIONS:

Questionnaire Version 1.1	Questionnaire Version 6.0
	INSTRUCTIONS: Indicate whether you have received training through any of the following scenarios over the past 12 months.
	SCALE: No, Yes, If yes how many days (in full days)_____
	<ul style="list-style-type: none"> • Company sponsored/On company time (definition: company pays for training and pays you while you are attending training) • Company sponsored/On your own time (definition: company pays for training, but you are not paid by your company for the time you spend training) • Self sponsored/On company time (definition: you pay for the training, but your company pays for your time while you are attending the training) • Self sponsored/On your own time (definition: you pay for the training and you are not paid by your company for the time you spend on the training)
	SCALE: Strongly disagree, Disagree, Agree, Strongly agree **
	I am given a real opportunity to improve my skills at this company through education and training programs. **
	I have had sufficient job-related training. **
	My supervisor helped me acquire additional job-related training when I have needed it. **
	My supervisor helped me acquire additional job-related training when I have needed it. **
	I receive ongoing training, which enables me to do my job better. **
	I am satisfied with the number of training and development programs available to me. **
	The training and educational activities I have received enabled me to perform my job more effectively. **
	Overall, I am satisfied with my training opportunities. **
	I am satisfied with the training opportunities offered to me to keep up with the latest technologies. **

** In addition to specific questions on training programs and activities, we added a set of nine questions on training that form a scale on general training.

DEVELOPMENT ACTIVITIES

MODIFICATIONS:

Questionnaire Version 1.1	Questionnaire Version 6.0
INSTRUCTIONS: In this section, we would like to know about company-sponsored training and development activities in which you have participated AT YOUR COMPANY.	INSTRUCTIONS: In this section, we would like to know about development activities in which you have participated AT YOUR COMPANY.
Management development: Programs designed to teach broad managerial skills, such as supervision and coaching, management decision making, strategic policy making.	Management development: Programs or activities designed to teach managerial skills, such as supervision, coaching, recruiting, management decision making, strategic policy making.
Coaching from Peers: Formal to informal process of day-to-day coaching and counseling by one or more of your peers on how to improve your job performance and get along in the organization.	Coaching From Peers: Formal or informal process of day-to-day coaching and counseling by one or more of your peers on how to do certain things and/or get along in the organization.
Mentor: A relationship with a more experienced colleague in order to provide you with increased opportunities for advancement, corporate visibility, guidance and advise, and “running interference.”	Mentorship: A relationship with a more experienced colleague in order to provide you with increased opportunities for advancement, corporate visibility, guidance and advice.

DELETIONS:

Questionnaire Version 1.1	Questionnaire Version 6.0
Technical Training: Programs designed to teach specific job-related information and skills (e.g., programming, languages).	
Sponsor: A relationship with an individual of higher status or greater influence in the organization that provides you with “favored status,” special treatment, or increased power and influence.	

CAREER ADVANCEMENT

MODIFICATIONS:

Questionnaire Version 1.1	Questionnaire Version 6.0
SCALE: Strongly agree, Agree, Disagree, Strongly disagree, Uncertain	SCALE: Strongly disagree, Disagree, Neither agree nor disagree, Agree, Strongly agree
There is one person in my company that I can refer to as a mentor, sponsor, or “godfather/godmother.”	There is one person in my company that I can refer to as a mentor or sponsor.
There is at least one person in my corporate career that I can refer to as mentor, sponsor, or “godfather/godmother.”	There is at least one person in my corporate career that I can refer to as mentor or sponsor.

DELETIONS:

Questionnaire Version 1.1	Questionnaire Version 6.0
If I aspire to it, I believe I could become the chief executive officer of my company.	
A top line position in my company is open to me if I aspire to it.	

I believe my career options are largely restricted to minority related jobs.	
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DISCRIMINATION (GENERAL)

MODIFICATIONS:

Questionnaire Version 1.1	Questionnaire Version 6.0
INSTRUCTIONS (placement or question): Do you believe that unequal treatment or discrimination occurs at your workplace on the basis of:	INSTRUCTIONS: Have YOU experienced unequal treatment or discrimination at your current workplace on the basis of:
SCALE: No, Yes, Don't know	SCALE: No, Yes, Not applicable
<ul style="list-style-type: none"> • Age, especially the young? • Age, especially the old? • Sex, especially women? • Sex, especially men? • Having a family? • Being pregnant? • Favoritism? • Race, nationality or color? • Temporary or part-time employment relationship? 	<ul style="list-style-type: none"> • Age (against the young) • Age (against the old) • Sex (against women) • Sex (against men) • Having a family • Being pregnant • Favoritism • Race • Nationality • Color • English language capability • Disability • Religious orientation • Sexual orientation • Education level • Temporary employment relationship • Part-time employment relationship
INSTRUCTIONS (placement of question): Do you believe that you have experienced unequal treatment or discrimination yourself on the basis of:	INSTRUCTIONS: Do you believe that unequal treatment or discrimination occurs at your current workplace on the basis of:
SCALE: No, Yes, Don't know	SCALE: No, Yes, Not applicable
<ul style="list-style-type: none"> • Age, especially the young? • Age, especially the old? • Sex, especially women? • Sex, especially men? • Having a family? • Being pregnant? • Favoritism? • Race, nationality or color? • Temporary or part-time employment relationship? 	<ul style="list-style-type: none"> • Age (against the young) • Age (against the old) • Sex (against women) • Sex (against men) • Having a family • Being pregnant • Favoritism • Race • Nationality • Color • English language capability • Disability • Religious orientation • Sexual orientation • Education level • Temporary employment relationship • Part-time employment relationship

DISCRIMINATION (ETHNICITY)

MODIFICATIONS:

Questionnaire Version 1.1	Questionnaire Version 6.0
INSTRUCTIONS: Please indicate how much you agree/disagree with the following statements	INSTRUCTIONS: Please indicate how much you agree or disagree with the following statements.
SCALE: Strongly disagree, Disagree, Agree, Strongly agree, Uncertain	SCALE: Strongly disagree, Disagree, Neither agree nor disagree, Agree, Strongly agree, Not applicable

CORPORATE FIT

MODIFICATIONS:

Questionnaire Version 1.1	Questionnaire Version 6.0
SCALE: Strongly agree, Agree, Disagree, Strongly disagree, Uncertain	SCALE: Strongly disagree, Disagree, Neither agree nor disagree, Agree, Strongly agree, Not applicable

ADDITIONS:

Questionnaire Version 1.1	Questionnaire Version 6.0
	INSTRUCTIONS: The next set of questions asks questions about informal business activities, such as lunch, coffee breaks, etc...
	I understand my company's principles and goals and support them.

FLEXIBLE WORK PRACTICES

MODIFICATIONS:

Questionnaire Version 1.1	Questionnaire Version 6.0
INSTRUCTIONS: To help employees balance work and family/home responsibilities, which of these options are offered at your company? (Please check all that apply)	INSTRUCTIONS: to help employees balance work/home responsibilities your company may offer the following options. In the following list please check all the options that you could take advantage of if you need them.
SCALE: Yes, No, Don't know	SCALE: (Uses checkboxes)
<ul style="list-style-type: none"> • Extended leaves (more than 3 months) • Child care/referral • Elder care referral • Other: (Please describe on line below) 	<ul style="list-style-type: none"> • Extended leaves (more than 3 months) other than maternal/paternal leaves • Child care • Elder care • Other: (please describe):

ADDITIONS:

Questionnaire Version 1.1	Questionnaire Version 6.0
	Maternal or paternal leave time
	Leave for family related appointments/events
	Overall, are these options sufficient for your needs? (Circle one number of the scale below) [SCALE: 1-No not at all, 2, 3, 4, 5, 6, 7-Yes most definitely]
	Overall do you feel that you would be discouraged from taking advantage of these options? (Circle one number on the scale below) [SCALE: 1-No not at all, 2, 3, 4, 5, 6, 7-Yes most definitely]

REWARDS**MODIFICATIONS:**

Questionnaire Version 1.1	Questionnaire Version 6.0
SCALE: Strongly agree, Agree, Strongly disagree, Disagree	SCALE: Strongly Disagree, Disagree, Agree, Strongly agree
Generally, I feel this company rewards employees who make an extra effort.	There is a formal process in place in my company that rewards employees who make an extra effort.

ADDITIONS:

Questionnaire Version 1.1	Questionnaire Version 6.0
	The rewards and compensation I receive are equal to other in my company with the same status (i.e. job and/or years of experience).

JOB FUTURE UNCERTAINTY

Added this concept.

ADDITIONS:

Questionnaire Version 1.1	Questionnaire Version 6.0
	INSTRUCTIONS: Please indicate how often you are exposed to the following condition. **
	SCALE: Never, Occasionally, Often, Always **
	How often are you concerned or bothered about losing your job or being laid off? **
	SCALE: None, A little, Some, A lot **
	What are the possibilities that in the next few years... <ul style="list-style-type: none"> • your job will be eliminated • your job will be given to someone else • your job will be replaced by computers or other machines **

** In the original questionnaire, there was no question on job future uncertainty. Given the overall economic environment, we decided that it was important to measure this concept. We added a set of questions that we have used in previous studies.

JOB SATISFACTION

No modifications, deletions, or additions.

ORGANIZATIONAL INVOLVEMENT

MODIFICATIONS:

Questionnaire Version 1.1	Questionnaire Version 6.0
INSTRUCTIONS: Do you agree with the following statements?	INSTRUCTIONS: Please indicate how much you agree or disagree with the following statements.

FATIGUE AND TENSION

MODIFICATIONS:

Questionnaire Version 1.1	Questionnaire Version 6.0
INSTRUCTIONS: the following questions ask about how you have been feeling recently. The following 6 questions are designed to help determine your moods, since the way you feel is a part of your health. The list of words below describes feelings people have. Please read each item and circle one number for each word, which describes how you have been feeling during the past week, including today.	INSTRUCTIONS: The following 6 questions are designed to help determine your moods, since the way you feel is a part of your health. The list of words below describes feelings people have. Please read each item and circle one number for each word, which describes how you have been feeling <u>during the past week, including today</u> .
INSTRUCTIONS: the same goes for the next 5 questions. Please read each item and circle the number that describes your feelings best.	INSTRUCTIONS: Please read each question and circle the number that best describes your feelings.

INTENTION TO TURNOVER

MODIFICATIONS:

Questionnaire Version 1.1	Questionnaire Version 6.0
INSTRUCTIONS: Please answer the following questions.	INSTRUCTIONS: Please answer the following question.

DELETIONS:

Questionnaire Version 1.1	Questionnaire Version 6.0
INSTRUCTIONS: Please indicate how much you agree or disagree with the following statements.	
I often think about quitting.	
I will probably look for a new job in the next year.	

ADDITIONS:

Questionnaire Version 1.1	Questionnaire Version 6.0
	<p>If you'd consider leaving your current job, please check all the reasons that would apply:</p> <ul style="list-style-type: none"> • High job demands • Long working hours • Lack of challenge or boredom • Lack of social support • Inadequate flexible work practices / options • Conflicts between work and family • Ineffective management • Feeling discriminated against • Feeling of not fitting in • Lack of training • Lack of development opportunities • Inadequate rewards / reviews / raises • Inadequate opportunities for career advancement • Want a higher job status • Want to advance my career • Want a higher salary • Want a better compensation plan • Want to obtain more or different expertise • Want the opportunity to learn new things • Want more challenge in my job • Other (please specify):
	<p>If you'd decide to leave your current job, what would be your intentions? Please check all the intentions that apply.</p> <ul style="list-style-type: none"> • I would intend to look for a different type of job in my same company. • I would intend to stay in a similar type of job, but move to a different company. • I would intend to be in a different IT job in a different company. • I would intend to no longer work in the IT field. • I would intend not to look for another job at all. • Other (please specify):

BACKGROUND INFORMATION

MODIFICATIONS:

Questionnaire Version 1.1	Questionnaire Version 6.0
<p>What is your marital status?</p> <ul style="list-style-type: none"> • Married • Single • Separated • Divorced • Widowed 	<p>What is your current living situation? (Circle one number)</p> <ul style="list-style-type: none"> • Married • Single • Separated • Divorced • Widowed • Living with partner
<p>What is the highest level of education that you have completed? (circle one number)</p> <ul style="list-style-type: none"> • Some high school or G.E.D. • Some college • Bachelor's degree • Some graduate or professional study • Graduate or professional degree 	<p><i>Transferred to Introduction, question #10</i> What is the <u>highest level of education</u> that you have completed? (Circle one number)</p> <ul style="list-style-type: none"> • Some high school or G.E.D. • Some college • Bachelor's degree • Some graduate or professional study • Graduate or professional degree
<p>What best describes your IT/computer education/training background?</p> <ul style="list-style-type: none"> • Some high school computer-related courses • High school computer-related degree/certificate • Some technical college computer-related courses • Technical college computer-related degree • Some university computer-related courses • University computer-related Bachelor's degree • University computer-related Graduate (MS, PhD) degree • Company provided/private training courses • Self-taught • Other: _____ 	<p><i>Transferred to Introduction, question #11</i> What best describes your IT/computer education/training in terms of your formal schooling? (Circle one number)</p> <ul style="list-style-type: none"> • Some high school computer-related courses • High school computer-related degree/certificate • Some technical college computer-related courses • Technical college computer-related degree • Some university computer-related courses • University computer-related Bachelor's degree • University computer-related Graduate (MS, PhD) degree • No IT/computer-related formal schooling
<p>How long have you worked for your present employer?</p> <ul style="list-style-type: none"> • Years _____ Months _____ 	<p><i>Transferred to Introduction, question #7</i> How long have you worked for your present employer? Years _____ Months _____</p>
<p>How long have you worked in your current job (position)?</p> <ul style="list-style-type: none"> • Years _____ Months _____ 	<p><i>Transferred to Introduction, question #8</i> How long have you worked in your current job (position)? Years _____ Months _____</p>
<p>In what range is your annual salary in your current position? (Circle one)</p> <ul style="list-style-type: none"> • Below \$25,000 • \$25,000-\$34,000 • \$35,000-\$44,000 • \$45,000-\$54,000 • \$55,000-\$64,000 • \$65,000-\$74,000 • \$75,000-\$84,000 • \$85,000-\$94,000 • \$95,000 or above 	<p><i>Transferred to Introduction, question #13</i> In what range is your annual salary in your current position? (Circle one)</p> <ul style="list-style-type: none"> • Below \$25,000 • \$25,000-\$34,000 • \$35,000-\$44,000 • \$45,000-\$54,000 • \$55,000-\$64,000 • \$65,000-\$74,000 • \$75,000-\$84,000 • \$85,000-\$94,000 • \$95,000 or above

<p>What is your present job title? _____ _____</p>	<p><i>Transferred to Introduction, question #1</i> Which of the following best describes your current job position (please check only one):</p> <ul style="list-style-type: none"> • Application software developer • Business analyst / consultant • Data entry • Database administrator / Database manager / Database security • Database analyst / Database architect • Documentation / Technical writer • Network administrator / Network manager • Network engineer / Network technician / PC technician • Project manager / Program manager / Applications manager / Operations manager • Quality assurance / Testing engineer • Software engineer / Software life cycle management • Systems administrator / Systems security • Systems analyst / Systems architect / Application engineer • Technical support / Field technician • Training • User interface design • Webmaster / Web site developer • Digital media specialist • Other (please specify): _____
<p>Job type? (circle one)</p> <ul style="list-style-type: none"> • Professional • Supervisor/manager 	<p><i>Transferred to Introduction, question #2</i> What is your job type? (Circle one number)</p> <ul style="list-style-type: none"> • Professional • Supervisor/manager • Other (please specify): _____
<p>On an average, how many hours per week do you work? _____Hours per week</p>	<p><i>Transferred to Introduction, question #3</i> On an average, how many hours per week do you work? _____Hours per week</p>
<p>On an average, how many hours of overtime per week do you work? _____Hours per week</p>	<p><i>Transferred to Introduction, question #4</i> On an average, how many hours of overtime per week do you work? _____Hours per week</p>
<p>Type of employment? (circle one)</p> <ul style="list-style-type: none"> • Full-time permanent employee • Part-time permanent employee • Full-time temporary employee • Part-time temporary employee 	<p><i>Transferred to Introduction, question #5</i> What is your type of employment? (Circle one number)</p> <ul style="list-style-type: none"> • Permanent employee • Temporary employee • Other (please describe) _____
	<p>Are you a full-time or a part-time employee? (circle one number)</p> <ul style="list-style-type: none"> • Part-time • Full-time